

## ABSTRACT

Liquid Crystal Devices with Greyscale

This invention relates to a liquid crystal device with grey scale. The invention uses dither, either spatial or temporal. For spatial dither the invention arranges so that at least one bit of dither is not a multiple of the size of a smaller bit of dither – in other words there is a fractional weighting. The two bits of dither have the same number of addressable transmission levels and the weighting sacrifices some linearity in exchange for reduction of manufacturing tolerances for the smaller bit. For temporal dither the invention relates to fractional weighting of the duration of the sub-frames.